

according to Regulation UK SI 2019/758 and UK SI 2020/1577 as amended

Revision Date 22-Sep-2023 Revision Number 5

# SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1. Product identifier

 Product Description:
 1-Dimethylamino-2-propanol

 Cat No. :
 115870000; 115870010; 115872500

 Index No
 603-077-00-4

 CAS No
 108-16-7

 Molecular Formula
 C5 H13 N O

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use Laboratory chemicals.
Uses advised against No Information available

### 1.3. Details of the supplier of the safety data sheet

Company

UK entity/business name

Fisher Scientific UK Bishop Meadow Road,

Loughborough, Leicestershire LE11 5RG, United Kingdom

**EU entity/business name** Thermo Fisher Scientific

Janssen Pharmaceuticalaan 3a, 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## **SECTION 2: HAZARDS IDENTIFICATION**

#### 2.1. Classification of the substance or mixture

#### CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567

#### **Physical hazards**

Flammable liquids Category 3 (H226)

**Health hazards** 

Acute oral toxicity Category 4 (H302)

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Skin Corrosion/Irritation Category 1 B (H314)
Serious Eye Damage/Eye Irritation Category 1 (H318)

#### **Environmental hazards**

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

#### 2.2. Label elements



Signal Word

**Danger** 

#### **Hazard Statements**

H226 - Flammable liquid and vapor

H314 - Causes severe skin burns and eye damage

H302 - Harmful if swallowed

## **Precautionary Statements**

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P280 - Wear eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P310 - Immediately call a POISON CENTER or doctor/physician

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

#### 2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - According to GB-CLP Regulations UK SI 2019/720 and UK SI 2020/1567
N,N-Dimethylisopropanolamine	108-16-7	EEC No. 203-556-4	99	Flam. Liq. 3 (H226) Acute Tox. 4 (H302) Skin Corr. 1B (H314)

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Full text of Hazard Statements: see section 16

## **SECTION 4: FIRST AID MEASURES**

## 4.1. Description of first aid measures

**Eye Contact** Immediate medical attention is required. Rinse immediately with plenty of water, also under

the eyelids, for at least 15 minutes.

**Skin Contact** Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Immediate medical attention is required.

Do NOT induce vomiting. Call a physician immediately. Ingestion

Inhalation Remove from exposure, lie down, Remove to fresh air, If breathing is difficult, give oxygen.

If not breathing, give artificial respiration. Get medical attention.

Ensure that medical personnel are aware of the material(s) involved, take precautions to Self-Protection of the First Aider

protect themselves and prevent spread of contamination.

#### 4.2. Most important symptoms and effects, both acute and delayed

Difficulty in breathing. Causes burns by all exposure routes. . Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

## 4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Symptoms may be delayed.

## **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

## **Suitable Extinguishing Media**

Water spray. Carbon dioxide (CO 2). Dry chemical. Chemical foam. Water mist may be used to cool closed containers.

## Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

### 5.2. Special hazards arising from the substance or mixture

Flammable. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

#### **Hazardous Combustion Products**

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Toxic fumes.

## 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Take precautionary measures against static discharges.

#### 6.2. Environmental precautions

See Section 12 for additional Ecological Information.

#### 6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Take precautionary measures against static discharges.

#### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

#### **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

Do not breathe mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Take precautionary measures against static discharges. Handle product only in closed system or provide appropriate exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

## 7.2. Conditions for safe storage, including any incompatibilities

Keep in a dry place. Keep container tightly closed. Keep away from heat, sparks and flame. Keep at .? °C. Flammables area. Keep container tightly closed in a dry and well-ventilated place.

**Technical Rules for Hazardous Substances (TRGS) 510** Class 3 Storage Class (LGK) (Germany)

#### 7.3. Specific end use(s)

Use in laboratories

## **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### 8.1. Control parameters

#### **Exposure limits**

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

#### **Biological limit values**

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This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

### Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
N,N-Dimethylisopropanolamine 108-16-7 ( 99 )		DNEL = 2mg/m <sup>3</sup>		DNEL = 2mg/m <sup>3</sup>

#### **Predicted No Effect Concentration (PNEC)**

See values below.

Component	Fresh water	Fresh water	Water Intermittent	Microorganisms in	Soil (Agriculture)
		sediment		sewage treatment	
N,N-Dimethylisopropanola	PNEC =	PNEC =	PNEC = 0.774mg/L	PNEC = 10mg/L	PNEC =
mine	0.0774mg/L	0.728mg/kg			0.0998mg/kg soil
108-16-7 ( 99 )	-	sediment dw			dw

Component	Marine water	Marine water sediment	Marine water intermittent	Food chain	Air
N,N-Dimethylisopropanola	PNEC =	PNEC =			
mine	0.00774mg/L	0.0728mg/kg			
108-16-7 (99)	· ·	sediment dw			

#### 8.2. Exposure controls

#### **Engineering Measures**

Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

#### Personal protective equipment

**Eye Protection** Goggles (European standard - EN 166)

Hand Protection Protective gloves

G	love material	Breakthrough time	Glove thickness	EU standard	Glove comments
	Nitrile rubber	See manufacturers	-	EN 374	(minimum requirement)
	Viton (R)	recommendations			

**Skin and body protection**Wear appropriate protective gloves and clothing to prevent skin exposure.

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use

appropriate certified respirators.

To protect the wearer, respiratory protective equipment must be the correct fit and be used

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and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits

are exceeded or if irritation or other symptoms are experienced

Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to

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EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure

limits are exceeded or if irritation or other symptoms are experienced.

Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN

100 g/L aq.sol

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When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls No information available.

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

#### 9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance Colorless
Odor Rotten-egg like
Odor Threshold No data available
Melting Point/Range -85 °C / -121 °F
Softening Point
Rolling Point/Range 126 °C / 258.8 °F

Boiling Point/Range126 °C / 258.8 °F@ 760 mmHgFlammability (liquid)FlammableOn basis of test dataFlammability (solid,gas)Not applicableLiquid

**Explosion Limits** 

**Lower** 2.7 **Upper** 11.1

Flash Point 26 °C / 78.8 °F Method - No information available

Autoignition Temperature 225 °C / 437 °F Decomposition Temperature No data available

pH 12.1

Viscosity 4.9 mPa.s at 50 °C

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

**Component log Pow** N,N-Dimethylisopropanolamine -0.12

Vapor Pressure 14.53 mbar @ 20 °C

Density / Specific Gravity 0.850

Bulk DensityNot applicableLiquidVapor DensityNo data available(Air = 1.0)

Particle characteristics Not applicable (liquid)

#### 9.2. Other information

Molecular Formula C5 H13 N O Molecular Weight 103.16

**Explosive Properties** explosive air/vapour mixtures possible

## **SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

None known, based on information available

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10.2. Chemical stability

Stable.

10.3. Possibility of hazardous reactions

**Hazardous Polymerization** 

Hazardous polymerization does not occur.

**Hazardous Reactions** 

No information available.

10.4. Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.

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10.5. Incompatible materials

Acids. Amines.

10.6. Hazardous decomposition products

Nitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Toxic fumes.

## **SECTION 11: TOXICOLOGICAL INFORMATION**

#### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### **Product Information**

(a) acute toxicity;

Oral Category 4

**Dermal Inhalation**Based on available data, the classification criteria are not met
Based on available data, the classification criteria are not met

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
N,N-Dimethylisopropanolamine	-	LD50 = 1232 mg/kg (Rat)	LC50 = 0.3 mg/L (Rat) 4 h

(b) skin corrosion/irritation; Category 1 B

(c) serious eye damage/irritation; Category 1

(d) respiratory or skin sensitization;

Respiratory No data available Skin No data available

(e) germ cell mutagenicity; No data available

Not mutagenic in AMES Test

(f) carcinogenicity; No data available

There are no known carcinogenic chemicals in this product

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; No data available

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**Target Organs** No information available.

(i) aspiration hazard; No data available

**Other Adverse Effects** See actual entry in RTECS for complete information

delayed

Symptoms / effects, both acute and Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

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#### 11.2. Information on other hazards

**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any

known or suspected endocrine disruptors.

## **SECTION 12: ECOLOGICAL INFORMATION**

12.1. Toxicity

**Ecotoxicity effects** Do not empty into drains.

12.2. Persistence and degradability Expected to be biodegradable

**Persistence** Miscible with water, Persistence is unlikely, based on information available.

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
N,N-Dimethylisopropanolamine	-0.12	No data available

The product is water soluble, and may spread in water systems Will likely be mobile in the 12.4. Mobility in soil

environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB

assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent

and very bioaccumulative (vPvB).

12.6. Endocrine disrupting

properties

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

12.7. Other adverse effects

**Persistent Organic Pollutant Ozone Depletion Potential** 

This product does not contain any known or suspected substance This product does not contain any known or suspected substance

## **SECTION 13: DISPOSAL CONSIDERATIONS**

#### 13.1. Waste treatment methods

Waste from Residues/Unused

**Products** 

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

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Contaminated Packaging Dispose of this container to hazardous or special waste collection point. Empty containers

retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and

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empty container away from heat and sources of ignition.

European Waste Catalogue (EWC) According to the European Waste Catalog, Waste Codes are not product specific, but

application specific.

Other Information Waste codes should be assigned by the user based on the application for which the product

was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic

organisms. Solutions with high pH-value must be neutralized before discharge.

## **SECTION 14: TRANSPORT INFORMATION**

#### IMDG/IMO

**14.1. UN number** UN2734

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

14.3. Transport hazard class(es) 8
Subsidiary Hazard Class 3
14.4. Packing group II

#### ADR

**14.1. UN number** UN2734

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

14.3. Transport hazard class(es)8Subsidiary Hazard Class314.4. Packing groupII

#### IATA

**14.1. UN number** UN2734

14.2. UN proper shipping name AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.

14.3. Transport hazard class(es)8Subsidiary Hazard Class314.4. Packing groupII

14.5. Environmental hazards No hazards identified

**14.6. Special precautions for user** No special precautions required.

<u>14.7. Maritime transport in bulk</u> Not applicable, packaged goods according to IMO instruments

## **SECTION 15: REGULATORY INFORMATION**

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### **International Inventories**

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

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Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
N,N-Dimethylisopropanolamine	108-16-7	203-556-4	-	-	Х	X	KE-11186	Χ	Х

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
N,N-Dimethylisopropanolamine	108-16-7	X	ACTIVE	Х	-	Х	Х	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

## Authorisation/Restrictions according to EU REACH

Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization		REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
N,N-Dimethylisopropanolamine	108-16-7	-	Use restricted. See item 75. (see link for restriction details)	-

#### **REACH links**

https://echa.europa.eu/substances-restricted-under-reach

#### Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
N,N-Dimethylisopropanolami ne	108-16-7	Not applicable	Not applicable

Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

## **National Regulations**

UK - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

WGK Classification See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
N,N-Dimethylisopropanolamine	WGK1	

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#### 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## **SECTION 16: OTHER INFORMATION**

#### Full text of H-Statements referred to under sections 2 and 3

H226 - Flammable liquid and vapor

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

#### Legend

**CAS** - Chemical Abstracts Service

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances **KECL** - Korean Existing and Evaluated Chemical Substances

I DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIOC - New Zealand Inventory of Chemicals

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

RPE - Respiratory Protective Equipment LC50 - Lethal Concentration 50% NOEC - No Observed Effect Concentration PBT - Persistent, Bioaccumulative, Toxic TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

Predicted No Effect Concentration (PNEC)

LD50 - Lethal Dose 50%

**EC50** - Effective Concentration 50% **POW** - Partition coefficient Octanol:Water **vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - (Volatile Organic Compound)

## Key literature references and sources for data

https://echa.europa.eu/information-on-chemicals

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

#### **Training Advice**

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts. Chemical incident response training.

Revision Date 22-Sep-2023 Revision Summary Not applicable.

## This safety data sheet complies with Regulation UK SI 2019/758 and UK SI 2020/1577 as amended.

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other

materials or in any process, unless specified in the text

## **End of Safety Data Sheet**